

Autonomic Networking Definitions Revisited

[draft-pentikousis-nmrg-andr-02](#)

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Motivation

- Lots of earlier research of AN, but little deployment
- IETF standardization recently started
- NMRG work on AN so far has aimed primarily on node-level aspects
 - Example: [draft-irtf-nmrg-autonomic-network-definitions] “specifically focuses on node level autonomic functions”
- We believe that AN research (and future standards) will extend into highly-virtualized and programmable infrastructures
 - Considerations beyond node-level autonomicity
 - New projects on 5G will look at exactly the intersection of AN and virtualization
 - NMRG can play a key role in this development
- This draft aims to serve as a discussion opener

Draft Goals

- Establish a common understanding about AN definitions beyond the node-level
- Consider AN in the emerging environment
 - Contribute to the cross-RG discussion (SDN/NFV/NM)
 - Explore joint possibilities for further drafts in this area
- Aspects discussed in -02 include
 - New deployment models
 - Programmable network elements and functions
 - Network and service virtualization
 - New operational models (e.g. DevOps)
 - Autonomic monitoring

Definitions

- Autonomicity at the system level, not at the node level, e.g., Autonomic System (AS) definition [FOCALE]:
 - "An AS is a system that operates ... managing its own self without external intervention"
- Minimum set of properties that an AS should possess
 - Automatic, i.e. it can "self-control its internal functions and operations"
 - Adaptive, i.e. it can change its "configuration, state and functions"
 - Aware, i.e. it can "monitor its operational context"

Draft Updates since -02

- Major change: Added Jeferson's contribution on Autonomic Monitoring
- Editorial round and updates

Current Status

- Draft under active development
- We aim to make this a community document
- Aim for RG adoption in an upcoming meeting (IETF 93?)

Please contribute